

IN THE ABSTRACT:

Please substitute the following Substitute Abstract for the originally filed Abstract:

Methods for eliminating error in magnetic sensors used for measuring a coating thickness caused by static or changing external magnetic fields or temperature. The methods involve measuring an output voltage of a magnetic sensor, corresponding to an internal resistance of the magnetic sensor, in a static or changing magnetic field or external temperature, storing the value of the output voltage, performing mathematical operations with the stored value of the output voltage, and correcting the output voltage of the magnetic sensor to accurately indicate a coating thickness.